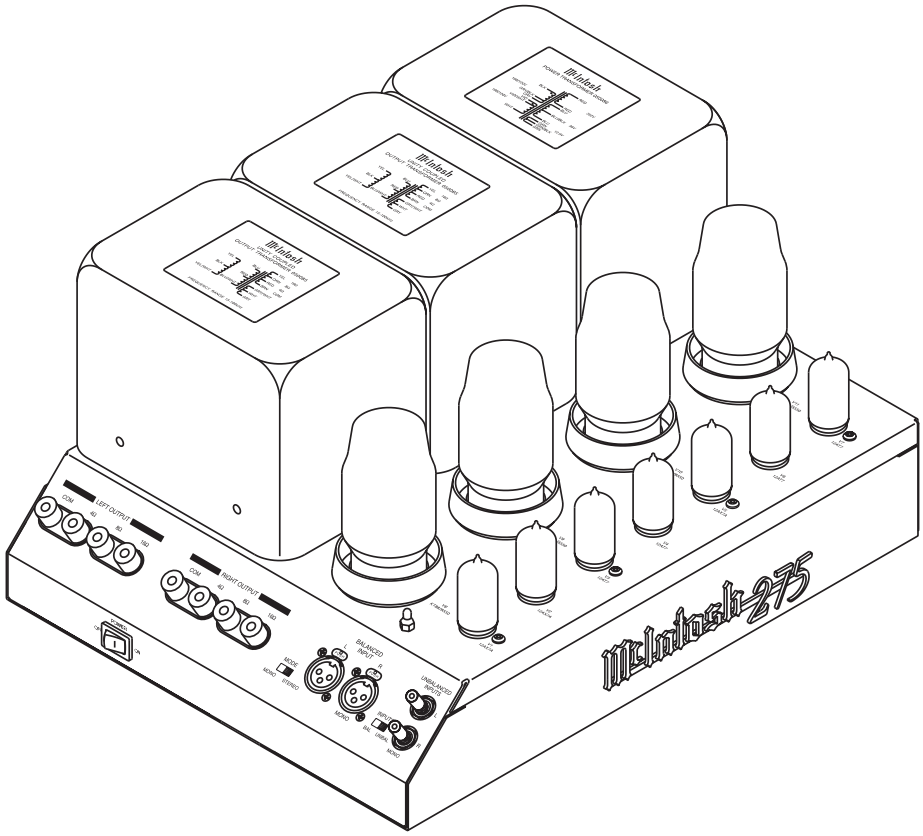
MC275

STEREO POWER AMPLIFIER

STARTING WITH SERIAL NO. WV1536



CONTENTS

Performance Specifications 2
Notes 2
Rear Panel 3
Section Location 4
Block Diagram 5
Interconnection Diagram ..... 7 - 8
Amplifier Schematic and PCB ..... 9 - 12
Input Schematic and PCB ..... 13 - 14
Parts List ..... 15 - 16
Exploded View and Parts List ..... 17 - 18
Repacking Instructions 19

McIntosh®

SERVICE MANUAL

PERFORMANCE SPECIFICATIONS

Power Output Stereo
Minimum sine wave continuous average power output per channel, both channels operating is:
75 watts into 4, 8 or 16 ohm load

Power Output Mono (Parallel)
Minimum sine wave continuous average power output is:
150 watts into 2 ohm, 4 ohm or 8 ohm load

Output Load Impedance
4, 8, or 16 ohm (Stereo Mode)
2, 4, or 8 ohm (Mono Mode)

Rated Power Band
20Hz to 20,000Hz

Total Harmonic Distortion
Maximum Total Harmonic Distortion at any power level from 250 milliwatts to rated power output is 0.5%

Intermodulation Distortion
Maximum Intermodulation Distortion if instantaneous peak output per channel does not exceed twice the rated output, for any combination of frequencies from 20Hz to 20,000Hz, with both channels operating is 0.5%

A-Weighted Signal To Noise Ratio
100dB

Frequency Response
+0, -0.5dB from 20Hz to 20,000Hz
+0, -3dB from 10Hz to 70,000Hz

Sensitivity
1.2 Volt unbalanced inputs
2.5 Volt balanced inputs

Wide Band Damping Factor
Greater than 14

Input Impedance
90,000 ohms unbalanced
180,000 balanced

Tube Compliment
3 - 12AX7A Inputs and Phase Inverters
4 - 12AT7 Voltage Amplifier and Drivers
4 - KT88/6550 Power Output

Power Requirements
100 Volts, 50/60Hz at 360 watts
110 Volts, 50/60Hz at 3.6 amps
120 Volts, 50/60Hz at 3.6 amps
220 Volts, 50/60Hz at 1.8 amps
230 Volts, 50/60Hz at 1.8 amps
240 Volts, 50/60Hz at 1.8 amps
Note: Refer to the right side panel of the MC275 for the correct voltage.

Overall Dimensions
Width is 16-1/2 inches (41.91cm), Height is 8-1/4 inches (20.96cm) including feet, Depth is 12 inches (30.48cm)

Weight
67 pounds (30.5kg) net, 75 pounds (34.lkg) in shipping carton

NOTES

1. The heavy lines on the schematic denote the primary signal path.

2. Unless otherwise noted, all voltages indicated on the schematics are measured under the following conditions:
   a. AC input at 120 volts, 50/60Hz.
   b. All voltages are +/-10% with respect to ground. A high impedance (10 megaohm) voltmeter must be used.

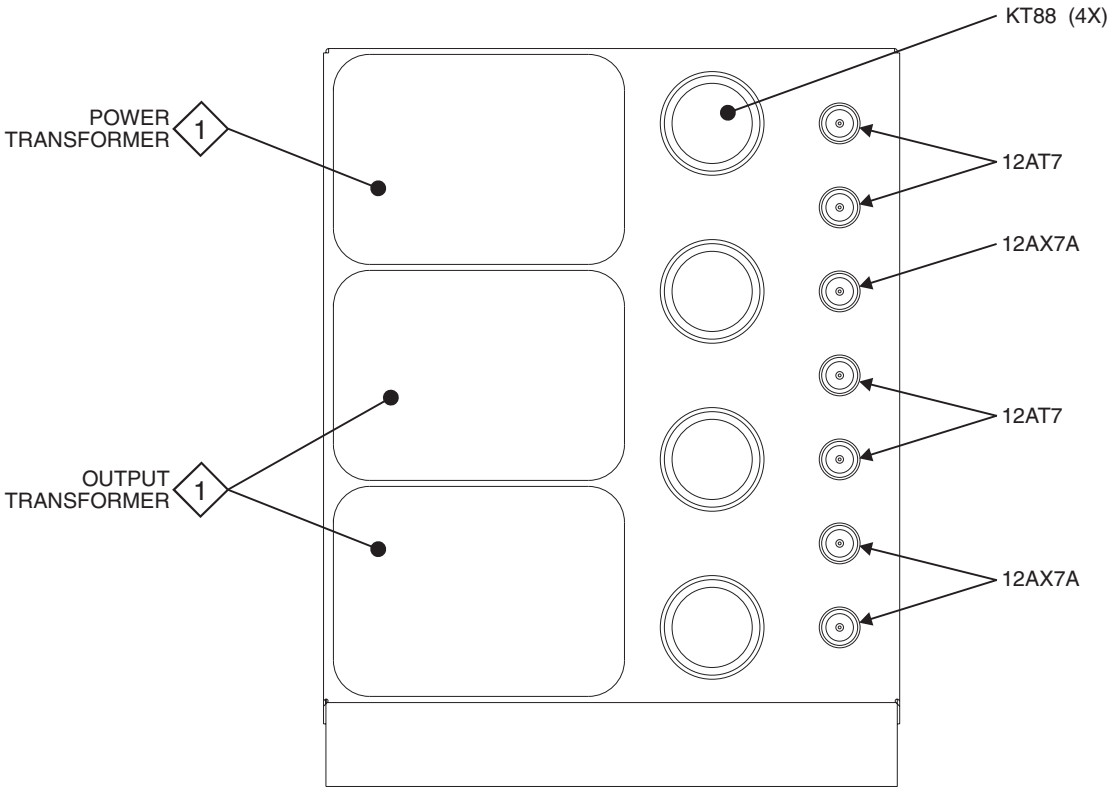
3. Unless otherwise specified:
   a. Resistor values are in ohms.
   b. Capacitor values are microfarads (uF).
   c. Inductor values are in microhenries (uH).

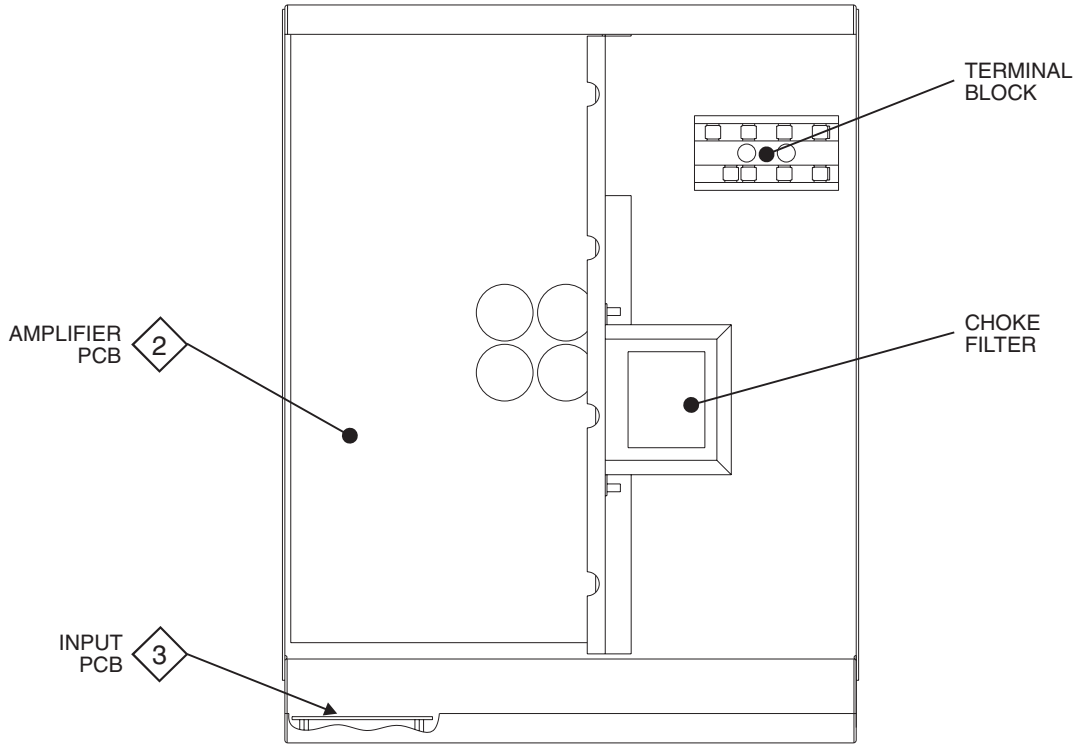
4. On PC board drawings, Square pad indicates:
   a. Polarized Capacitors - Positive
   b. Diodes - Cathode
   c. Others - Pin 1

5. **WARNING**
   Parts marked with the symbol ⚠ have critical characteristics. Use only replacement parts recommended by the manufacturer.

SECTION LOCATIONS

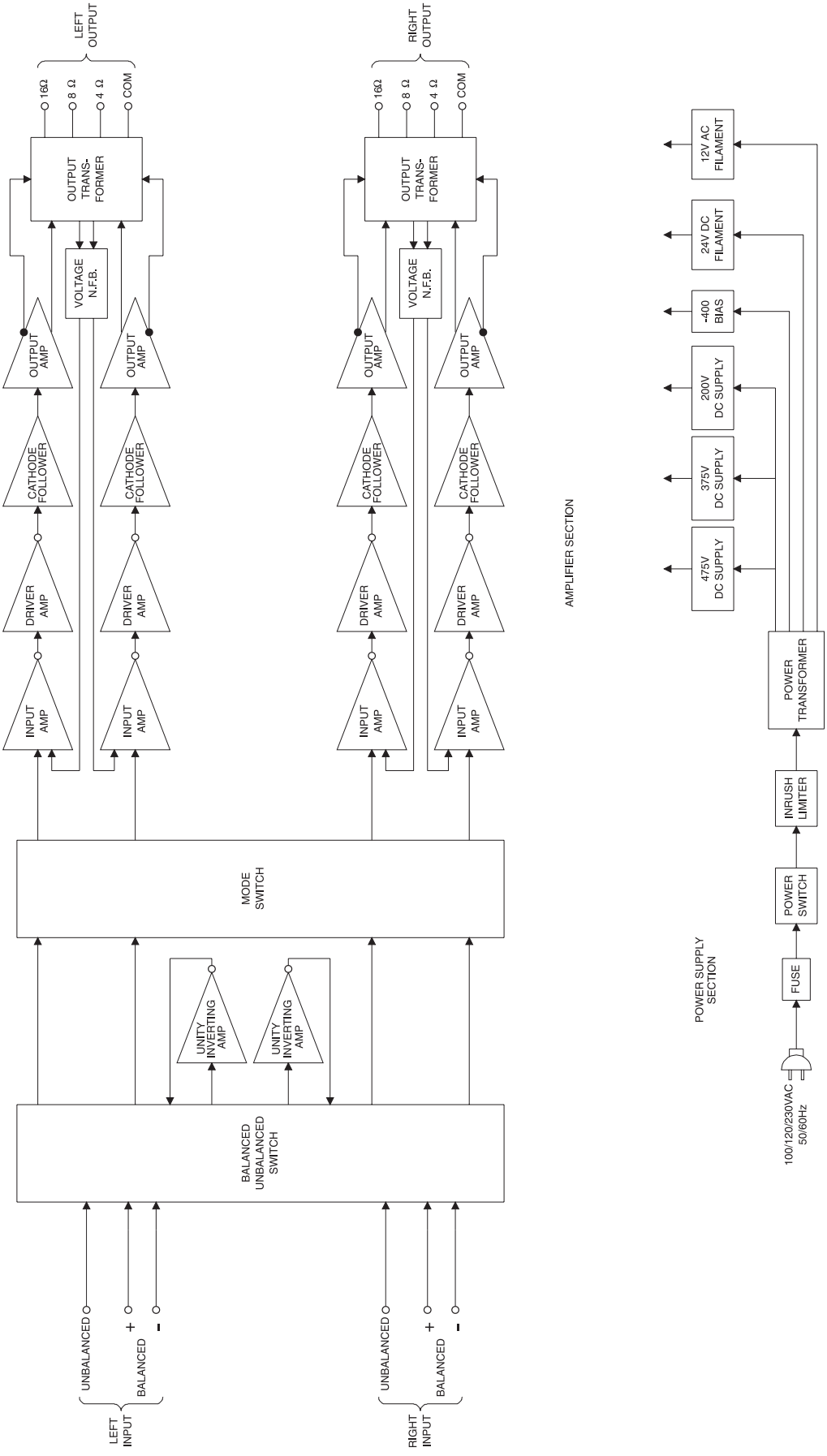
TOP VIEW WITH COVER REMOVED





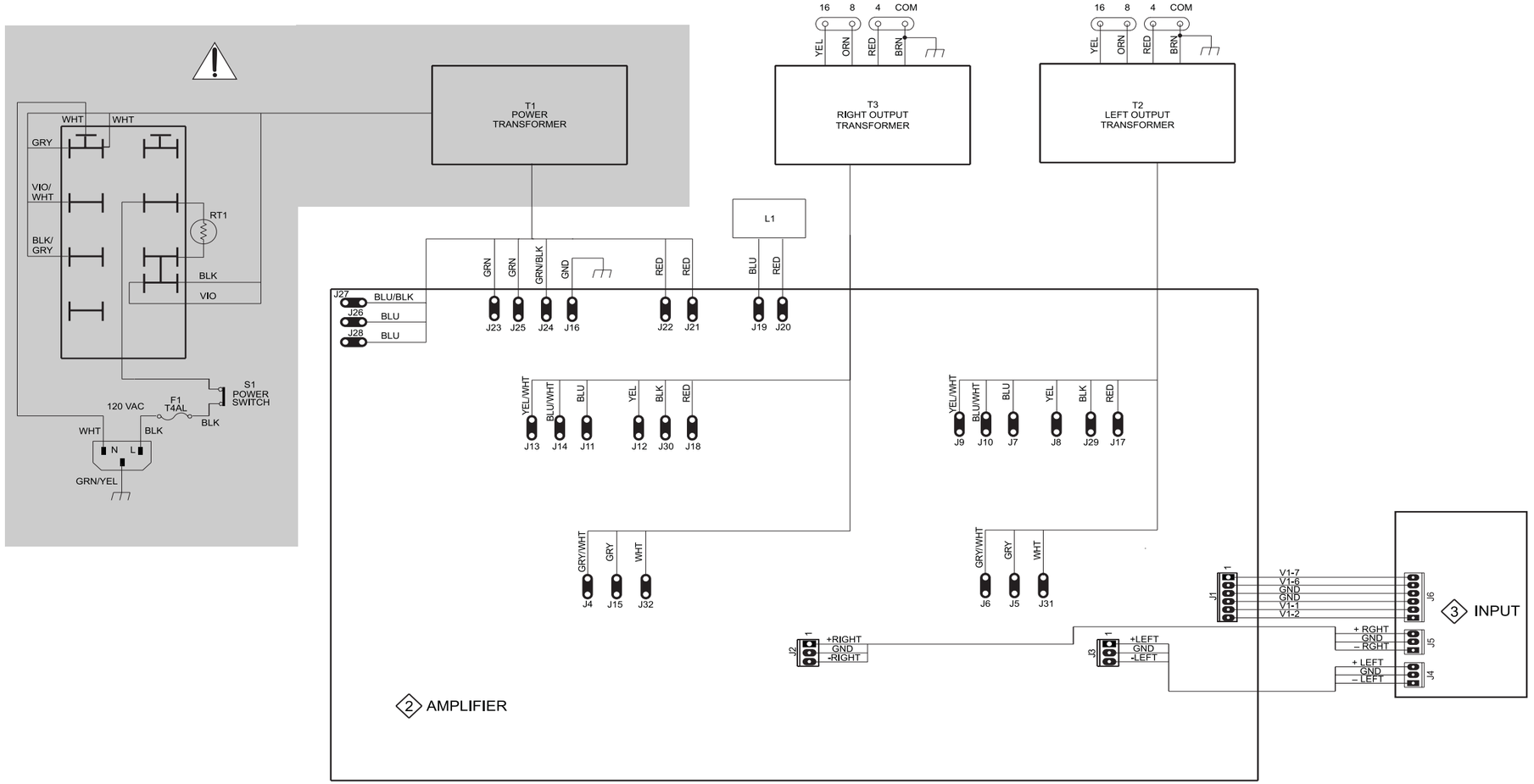
BOTTOM VIEW WITH COVER REMOVED

BLOCK DIAGRAM

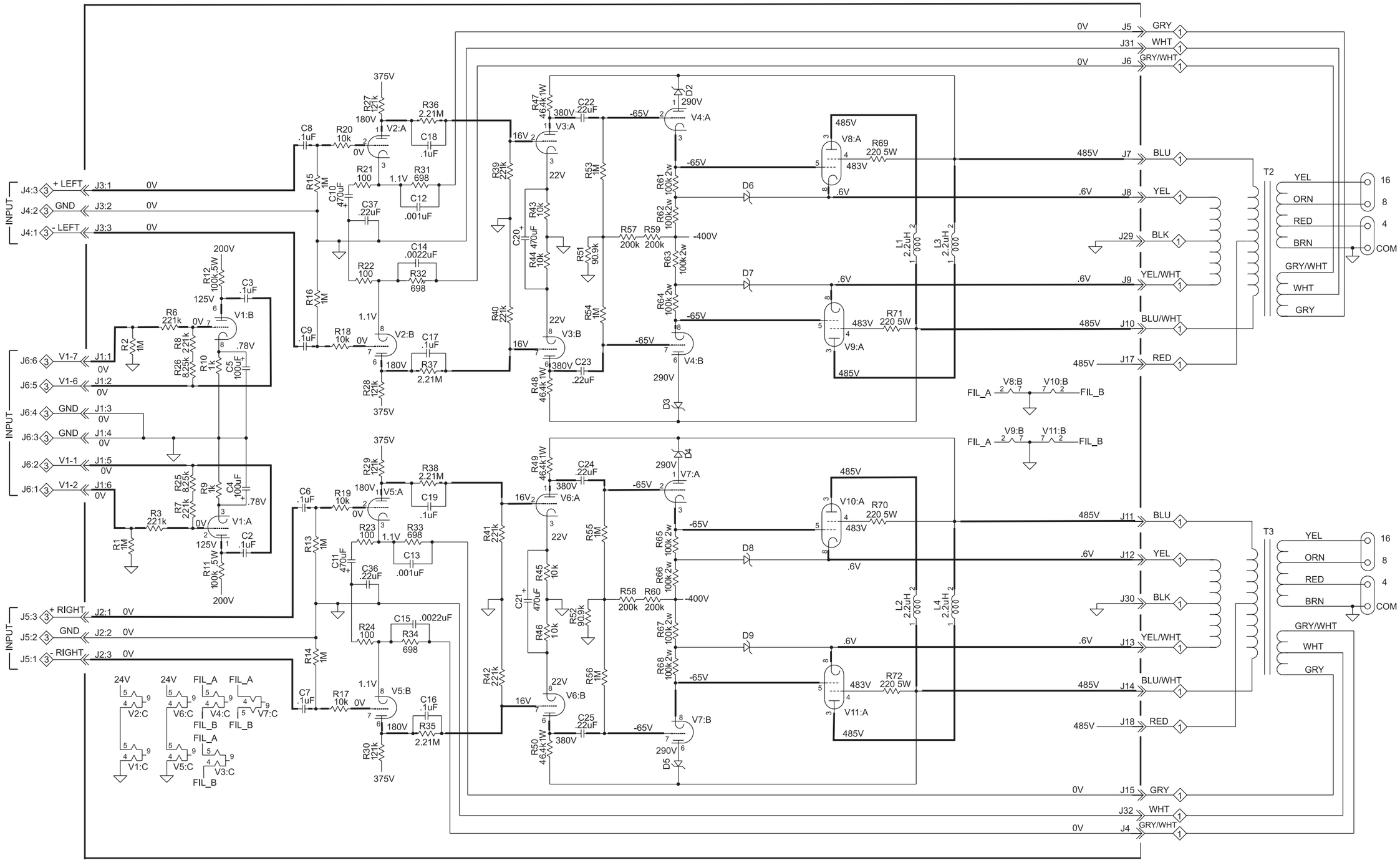


1 INTERCONNECT

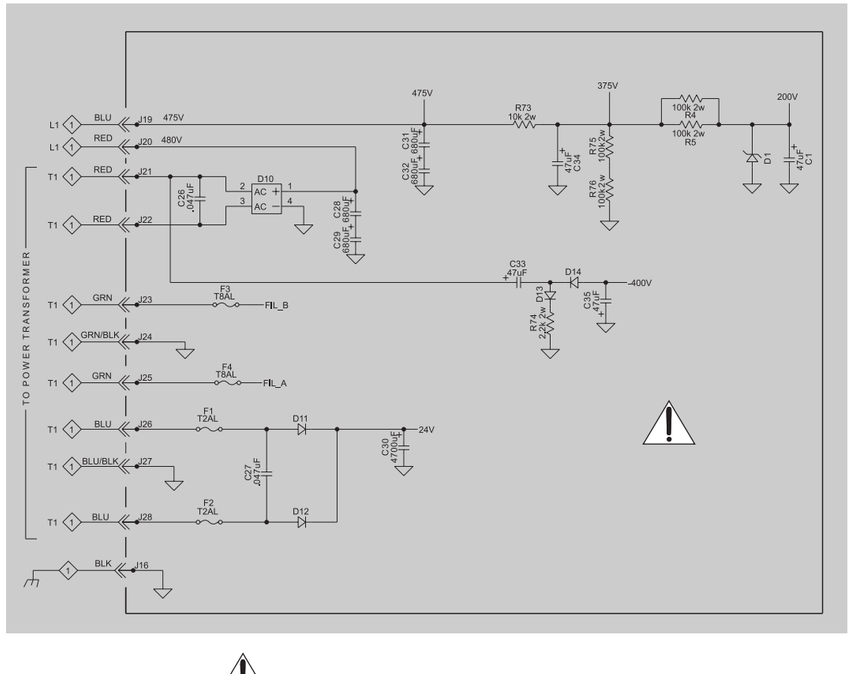
⚠ WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.



2A AMPLIFIER 750675

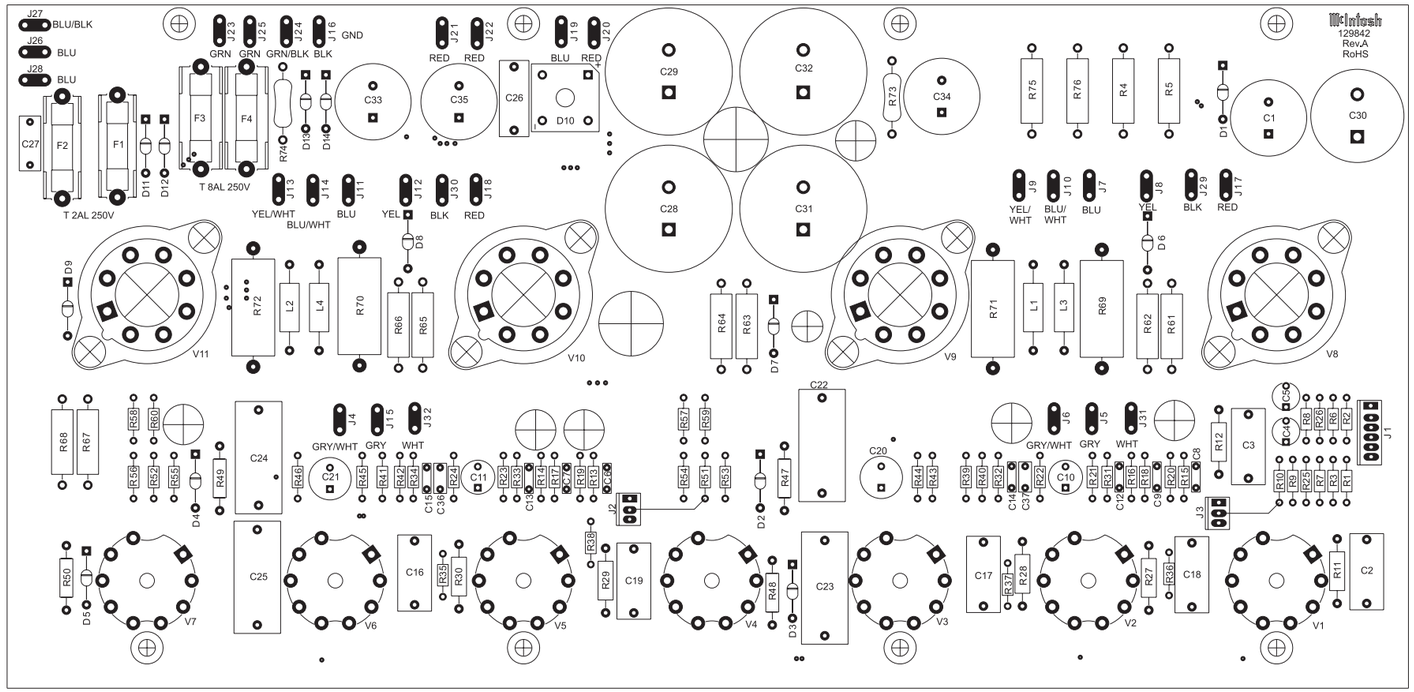

INPUT
J4:3 + LEFT J3:1 0V
J4:2 GND J3:2 0V
J4:1 - LEFT J3:3 0V
J6:6 V1-7 J1:1 0V
J6:5 V1-6 J1:2 0V
J6:4 GND J1:3 0V
J6:3 GND J1:4 0V
J6:2 V1-1 J1:5 0V
J6:1 V1-2 J1:6 0V
J5:3 + RIGHT J2:1 0V
J5:2 GND J2:2 0V
J5:1 - RIGHT J2:3 0V
V1:A V1:B V1:C V2:A V2:B V2:C V3:A V3:B V4:A V4:B V4:C V5:A V5:B V5:C V6:A V6:B V6:C V7:A V7:B V7:C V8:A V8:B V9:A V9:B V10:A V10:B V11:A V11:B
D1 D2 D3 D4 D5 D6 D7 D8 D9
T2 T3
J5 GRY J31 WHT J6 GRY/WHT J7 BLU J8 YEL J29 BLK J9 YEL/WHT J10 BLU/WHT J17 RED
J11 BLU J12 YEL J30 BLK J13 YEL/WHT J14 BLU/WHT J18 RED
J15 GRY J32 WHT J4 GRY/WHT
16 8 4 COM
YEL ORN RED BRN GRY/WHT WHT GRY
FIL_A FIL_B
0V 125V 180V 200V 290V 375V 380V 483V 485V -65V -400V 1.1V .6V 22V

2B AMPLIFIER 750675

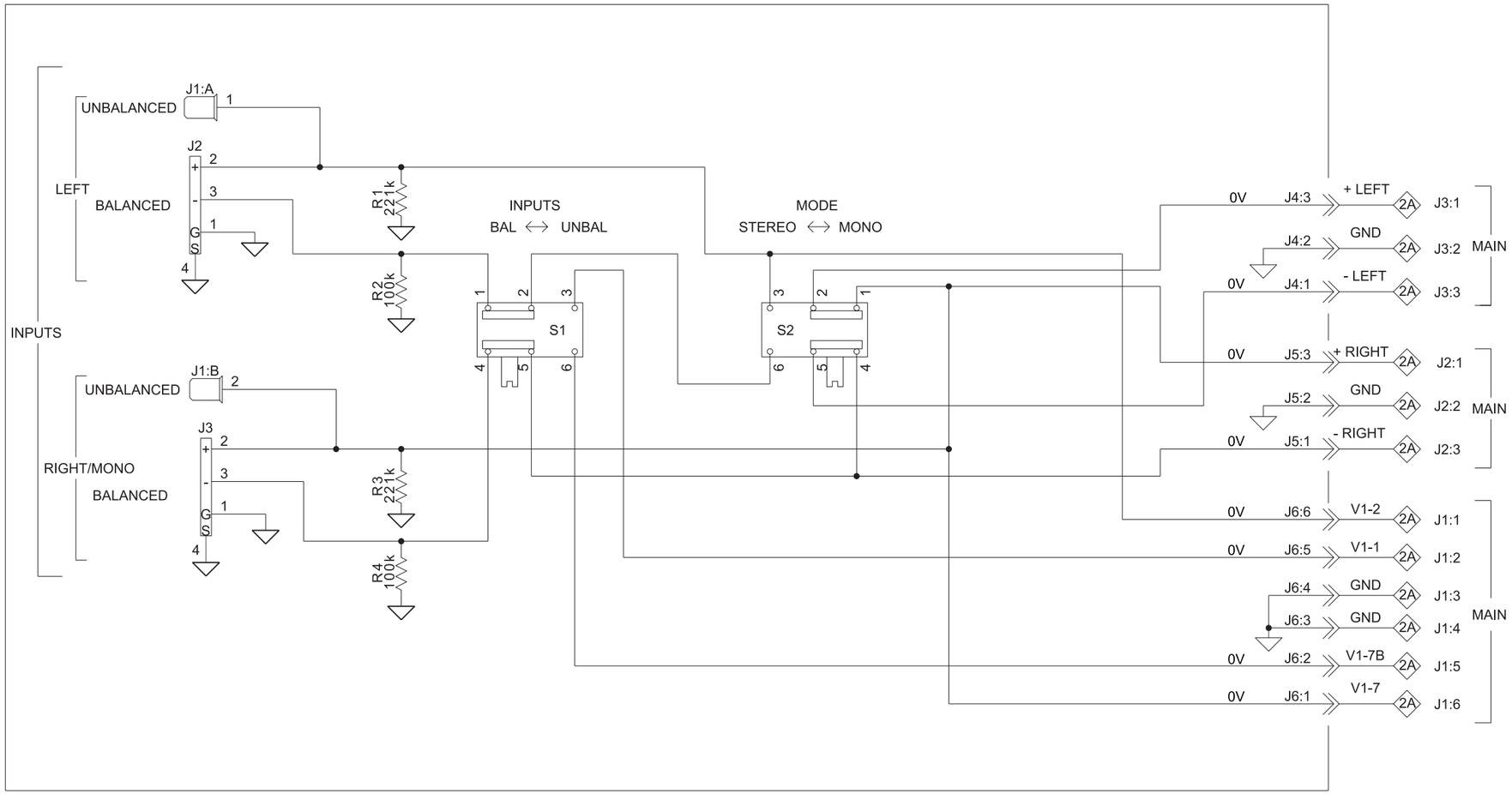


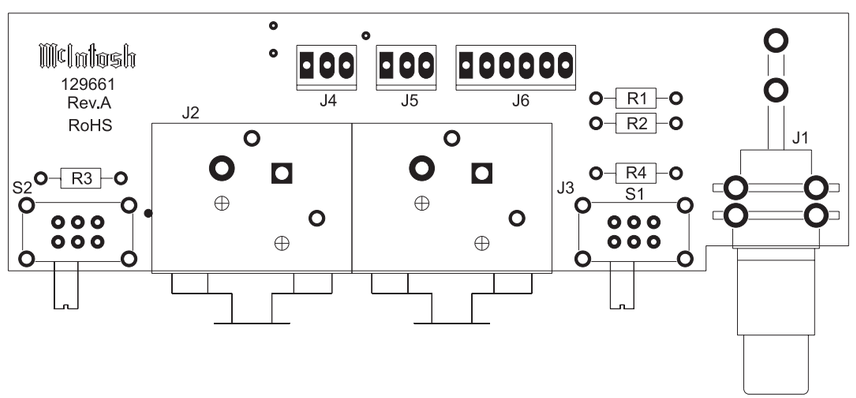
WARNING Parts located in the shaded area have critical characteristics. Use only replacement parts recommended by the manufacturer.

2 AMPLIFIER 750675



3 INPUT 750082





PARTS LIST

Ref. No.	Description	Part No.
1	**INTERCONNECT**	
F1	FUSE 4A 250V SLO-BLO 5X20 IEC	089135
L1	CHOKE FILTER 0.5H 800MA SLOTS	122379
RT1	ASSEMBLY THERMISTOR CL-40 5R	052008
S1	CABLE ASSY PWR SWCH	171729
T1	POTTED TRANSFORMER POWER	750086
T2	POTTED TRANSFORMER OUTPUT	750085
T3	POTTED TRANSFORMER OUTPUT	750085
2	**750675 AMPLIFIER PCB**	
C1	CAP ELECT 47UF 450V	066560
C2	CAP MPF 0.1UF 630VDC	064431
C3	CAP MPF 0.1UF 630VDC	064431
C4	CAP ELECT 100UF 25V	066573
C5	CAP ELECT 100UF 25V	066573
C6	CAP MPF 0.1UF 5% 63VDC	064325
C7	CAP MPF 0.1UF 5% 63VDC	064325
C8	CAP MPF 0.1UF 5% 63VDC	064325
C9	CAP MPF 0.1UF 5% 63VDC	064325
C10	CAP ELECT 470UF 16V	066508
C11	CAP ELECT 470UF 16V	066508
C12	CAP PF 0.001UF 5% 63VDC	064453
C13	CAP PF 0.001UF 5% 63VDC	064453
C14	CAP MPF 0.0022UF 5% 63VDC	064454
C15	CAP MPF 0.0022UF 5% 63VDC	064454
C16	CAP MPF 0.1UF 630VDC	064431
C17	CAP MPF 0.1UF 630VDC	064431
C18	CAP MPF 0.1UF 630VDC	064431
C19	CAP MPF 0.1UF 630VDC	064431
C20	CAP ELECT 470UF 50V	066469
C21	CAP ELECT 470UF 50V	066469
C22	CAP POLYPROP 0.22UF 20% 1KVDC	064432
C23	CAP POLYPROP 0.22UF 20% 1KVDC	064432
C24	CAP POLYPROP 0.22UF 20% 1KVDC	064432
C25	CAP POLYPROP 0.22UF 20% 1KVDC	064432
C26	CAP POLY .047UF 10% 1000VDC	064434
C27	CAP POLYPROP .047UF 10% 250VDC	064364
C28	CAP ELECT 680UF 315V	066549
C29	CAP ELECT 680UF 315V	066549
C30	CAP ELECT 4700UF 35V	066541
C31	CAP ELECT 680UF 315V	066549
C32	CAP ELECT 680UF 315V	066549
C33	CAP ELECT 47UF 450V	066560
C34	CAP ELECT 47UF 450V	066560
C35	CAP ELECT 47UF 450V	066560
C36	CAP MPF 0.22UF 5% 63VDC	064329
C37	CAP MPF 0.22UF 5% 63VDC	064329
D1	DIODE ZENER 200V 1.5W	070177
D2	DIODE ZENER 200V 1.5W	070177
D3	DIODE ZENER 200V 1.5W	070177
D4	DIODE ZENER 200V 1.5W	070177
D5	DIODE ZENER 200V 1.5W	070177
D6	DIODE ZENER 200V 1.5W	070177
D7	DIODE ZENER 200V 1.5W	070177
D8	DIODE ZENER 200V 1.5W	070177
D9	DIODE ZENER 200V 1.5W	070177
D10	DIODE BRIDGE RECT 1000V 6A	070180
D11	DIODE SIL 400 PIV @ 1.5A	070031
D12	DIODE SIL 400 PIV @ 1.5A	070031
D13	DIODE RECTIFIER	070178
D14	DIODE RECTIFIER	070178

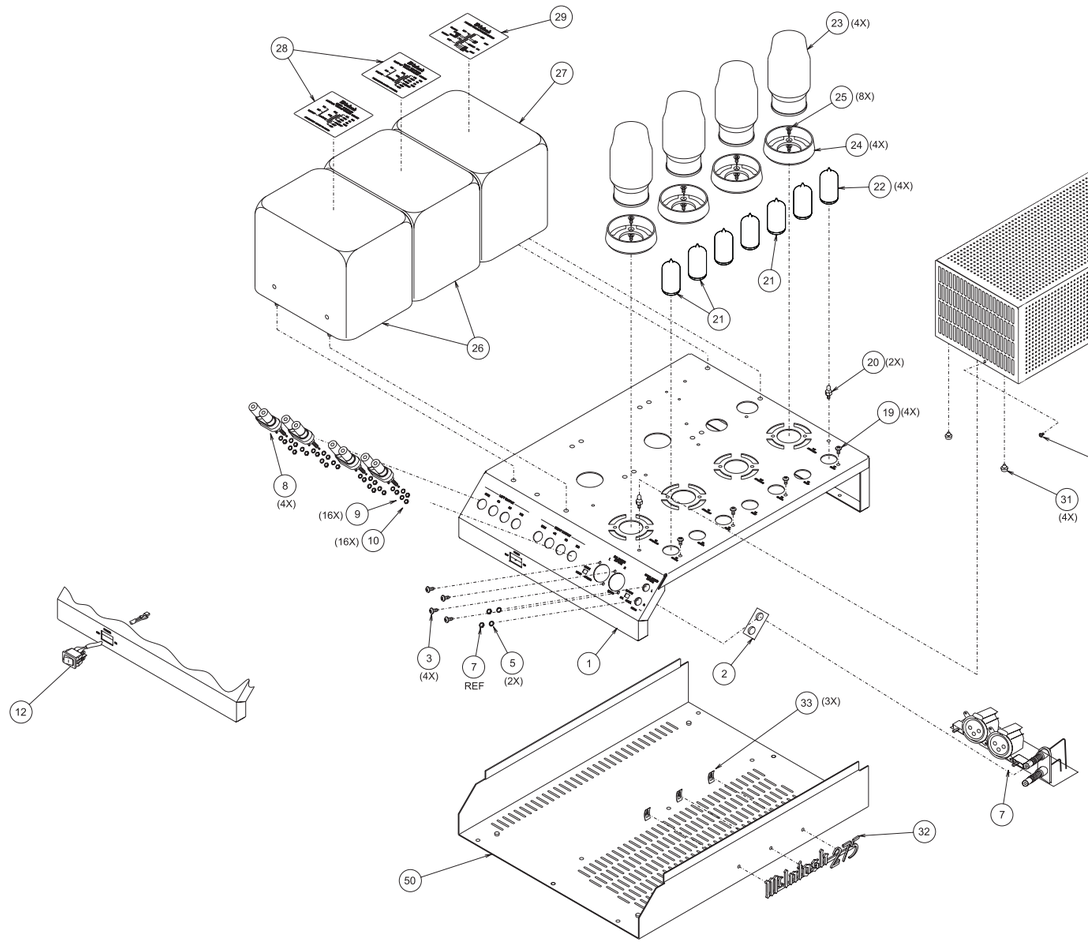
Ref. No.	Description	Part No.
F1	FUSE 2A 250V SLO-BLO 5X20 IEC	089123
F2	FUSE 2A 250V SLO-BLO 5X20 IEC	089123
F3	FUSE T8AL 250V SLO-BLO 5X20 IEC	089134
F4	FUSE T8AL 250V SLO-BLO 5X20 IEC	089134
J1	CONN MALE 6 POS FRICTION LOCK	117218
J2	CONN 3 POS MALE MTS100 NORMAL	117214
J3	CONN 3 POS MALE MTS100 NORMAL	117214
J4	BLADE FASTON W/FEET	117708
J5	BLADE FASTON W/FEET	117708
J6	BLADE FASTON W/FEET	117708
J7	BLADE FASTON W/FEET	117708
J8	BLADE FASTON W/FEET	117708
J9	BLADE FASTON W/FEET	117708
J10	BLADE FASTON W/FEET	117708
J11	BLADE FASTON W/FEET	117708
J12	BLADE FASTON W/FEET	117708
J13	BLADE FASTON W/FEET	117708
J14	BLADE FASTON W/FEET	117708
J15	BLADE FASTON W/FEET	117708
J16	BLADE FASTON W/FEET	117708
J17	BLADE FASTON W/FEET	117708
J18	BLADE FASTON W/FEET	117708
J19	BLADE FASTON .187	117726
J20	BLADE FASTON .187	117726
J21	BLADE FASTON W/FEET	117708
J22	BLADE FASTON W/FEET	117708
J23	BLADE FASTON W/FEET	117708
J24	BLADE FASTON W/FEET	117708
J25	BLADE FASTON W/FEET	117708
J26	BLADE FASTON W/FEET	117708
J27	BLADE FASTON W/FEET	117708
J28	BLADE FASTON W/FEET	117708
J29	BLADE FASTON W/FEET	117708
J30	BLADE FASTON W/FEET	117708
J31	BLADE FASTON W/FEET	117708
J32	BLADE FASTON W/FEET	117708
L1	CHOKE 2.2 UH	122405
L2	CHOKE 2.2 UH	122405
L3	CHOKE 2.2 UH	122405
L4	CHOKE 2.2 UH	122405
R1	RES MF 1M 1% 1/4W	144577
R2	RES MF 1M 1% 1/4W	144577
R3	RES MF 221K 1% 1/4W	144629
R4	RES MO 100K 5% 2W	144698
R5	RES MO 100K 5% 2W	144698
R6	RES MF 221K 1% 1/4W	144629
R7	RES MF 221K 1% 1/4W	144629
R8	RES MF 221K 1% 1/4W	144629
R9	RES MF 1K 1% 1/4W	144513
R10	RES MF 1K 1% 1/4W	144513
R11	RES MF 100K 1% 1/2W	144635
R12	RES MF 100K 1% 1/2W	144635
R13	RES MF 1M 1% 1/4W	144577
R14	RES MF 1M 1% 1/4W	144577
R15	RES MF 1M 1% 1/4W	144577
R16	RES MF 1M 1% 1/4W	144577
R17	RES MF 10K 1% 1/4W	144504
R18	RES MF 10K 1% 1/4W	144504
R19	RES MF 10K 1% 1/4W	144504
R20	RES MF 10K 1% 1/4W	144504
R21	RES MF 100 OHM 1% 1/4W	144568
R22	RES MF 100 OHM 1% 1/4W	144568

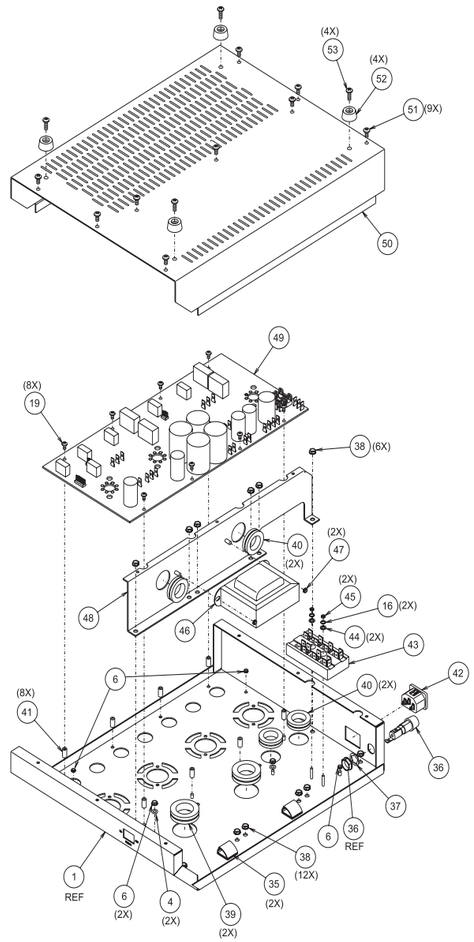
PARTS LIST con't

Ref. No.	Description	Part No.
R23	RES MF 100 OHM 1% 1/4W	144568
R24	RES MF 100 OHM 1% 1/4W	144568
R25	RES MF 8.25K 1% 1/4W	144549
R26	RES MF 8.25K 1% 1/4W	144549
R27	RES MF 121K OHM 1% 1/2W	144588
R28	RES MF 121K OHM 1% 1/2W	144588
R29	RES MF 121K OHM 1% 1/2W	144588
R30	RES MF 121K OHM 1% 1/2W	144588
R31	RES 698 OHM 1% 1/4W	144511
R32	RES 698 OHM 1% 1/4W	144511
R33	RES 698 OHM 1% 1/4W	144511
R34	RES 698 OHM 1% 1/4W	144511
R35	RES MF 2.21M 1% 1/4W	144576
R36	RES MF 2.21M 1% 1/4W	144576
R37	RES MF 2.21M 1% 1/4W	144576
R38	RES MF 2.21M 1% 1/4W	144576
R39	RES MF 221K 1% 1/4W	144629
R40	RES MF 221K 1% 1/4W	144629
R41	RES MF 221K 1% 1/4W	144629
R42	RES MF 221K 1% 1/4W	144629
R43	RES MF 10K 1% 1/4W	144504
R44	RES MF 10K 1% 1/4W	144504
R45	RES MF 10K 1% 1/4W	144504
R46	RES MF 10K 1% 1/4W	144504
R47	RES MO 46.4K 1% 1W	144637
R48	RES MO 46.4K 1% 1W	144637
R49	RES MO 46.4K 1% 1W	144637
R50	RES MO 46.4K 1% 1W	144637
R51	RES MF 90.9K 1% 1/4W	144557
R52	RES MF 90.9K 1% 1/4W	144557
R53	RES MF 1M 1% 1/4W	144577
R54	RES MF 1M 1% 1/4W	144577
R55	RES MF 1M 1% 1/4W	144577
R56	RES MF 1M 1% 1/4W	144577
R57	RES MF 200K 1% 1/4W	144531
R58	RES MF 200K 1% 1/4W	144531
R59	RES MF 200K 1% 1/4W	144531
R60	RES MF 200K 1% 1/4W	144531
R61	RES MO 100K 5% 2W	144698
R62	RES MO 100K 5% 2W	144698
R63	RES MO 100K 5% 2W	144698
R64	RES MO 100K 5% 2W	144698
R65	RES MO 100K 5% 2W	144698
R66	RES MO 100K 5% 2W	144698
R67	RES MO 100K 5% 2W	144698
R68	RES MO 100K 5% 2W	144698
R69	RES WW 220 OHM 10% 5W	139256
R70	RES WW 220 OHM 10% 5W	139256
R71	RES WW 220 OHM 10% 5W	139256
R72	RES WW 220 OHM 10% 5W	139256
R73	RES MO 10K 5% 2W	144638
R74	RES MO 2.2K 5% 2W	144666
R75	RES MO 100K 5% 2W	144698
R76	RES MO 100K 5% 2W	144698
(F1)	HOLDER FUSE 5X20MM PCB MOUNT	178159
(F2)	HOLDER FUSE 5X20MM PCB MOUNT	178159
(F3)	HOLDER FUSE 5X20MM PCB MOUNT	178159
(F4)	HOLDER FUSE 5X20MM PCB MOUNT	178159
(V1)	SOCKET 9 PIN TUBE CERAMIC	178170
(V2)	SOCKET 9 PIN TUBE CERAMIC	178170
(V3)	SOCKET 9 PIN TUBE CERAMIC	178170
(V4)	SOCKET 9 PIN TUBE CERAMIC	178170
(V5)	SOCKET 9 PIN TUBE CERAMIC	178170
(V6)	SOCKET 9 PIN TUBE CERAMIC	178170
(V7)	SOCKET 9 PIN TUBE CERAMIC	178170
(V8)	SOCKET OCTAL TUBE CERAMIC	178169
(V9)	SOCKET OCTAL TUBE CERAMIC	178169
(V10)	SOCKET OCTAL TUBE CERAMIC	178169
(V11)	SOCKET OCTAL TUBE CERAMIC	178169

◇3	**750082 INPUT PCB**	
J1	JACK PHONO GOLD	117862
J2	XLR FEMALE HORIZ PCB WITH LATCH	117814
J3	XLR FEMALE HORIZ PCB WITH LATCH	117814
J4	CONN 3 POS MALE MTS100 NORMAL	117214
J5	CONN 3 POS MALE MTS100 NORMAL	117214
J6	CONN MALE 6 POS FRICTION LOCK	117218
R1	RES MF 221K 1% 1/4W	144629
R2	RES MF 100K 1% 1/4W	144528
R3	RES MF 221K 1% 1/4W	144629
R4	RES MF 100K 1% 1/4W	144528
S1	SWITCH SLIDE DPDT	148076
S2	SWITCH SLIDE DPDT	148076

EXPLODED VIEW and PARTS LIST





Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	005653	CHASSIS	19	400157	SCREW MACH 6-32 X 1/4 PH PN	31	017862	PUSH-ON FOOT	44	404001	WASHER FLAT STEEL 4 X 9/32 X .025
2	005650	RCA SPACER	20	114012	BALL STUD	32	125667	NAMEPLATE	45	402022	NUT MACH 4-40 X 3/16 X 1/16
3	101197	SCREW HI/LO 4-24 X 3/8 PH RD BLK	21	165065	TUBE 12AX7A McINTOSH	33	106012	SPRING CLIP: PUSH-ON	46	122379	CHOKE FILTER
4	404007	WASHER LOCK 6 X .288 INT STAR	22	165067	TUBE 12AT7	35	017452	KLIP WIRE	47	402005	NUT MACH 8-32 W/LOCK
5	104165	WASHER 3/8 INTERNAL TOOTH GOLD	23	165070	TUBE KT88 WITH McINTOSH LOGO	36	178161	HOLDER FUSE 5 X 20mm IEC	48	005425	SUPPORT BRACKET
6	402003	NUT KEP 6-32	24	017761	AIR PIPE	37	404016	WASHER INT STAR .5 X .630 X .022	49	750675	ASSY AMPLIFIER PCB
7	750082	ASSY INPUT PCB	25	400292	SCREW MACH 6-32 X 3/8 PH FH BLK	38	102006	NUT MACH 10-32 W/LOCK	50	005426	BOTTOM COVER
8	084219	POST BINDING DUAL 4MM THREAD	26	750085	POTTED TRANSFORMER OUTPUT	39	078024	GROMMET RUBBER 1” ID	51	401078	SCREW TAP 8-32 X 5/16 PH PN BLK
9	404198	LOCK WASHER	27	750086	POTTED TRANSFORMER POWER	40	078025	GROMMET RUBBER 3/4” ID	52	017542	PLASTIC FOOT
10	410015	NUT M4 INT STAR SS	28	166126	DECAL OUTPUT TRANSFORMER	41	017859	SPACER NYLON 6-32 X 7/16	53	400153	SCREW MACH 8-32 X 1/2 PH PN
12	171729	CABLE ASSY POWER SWITCH	29	166127	DECAL POWER TRANSFORMER	42	117487	RECEPTACLE AC LINE	54	401109	SCREW TT 6-32 X 5/16 PH PN BLK
13	104165	WASHER 3/8 INT TOOTH GOLD	30	005651	TUBE COVER	43	074091	TERMINAL BLOCK AC			

REPACKING INSTRUCTIONS

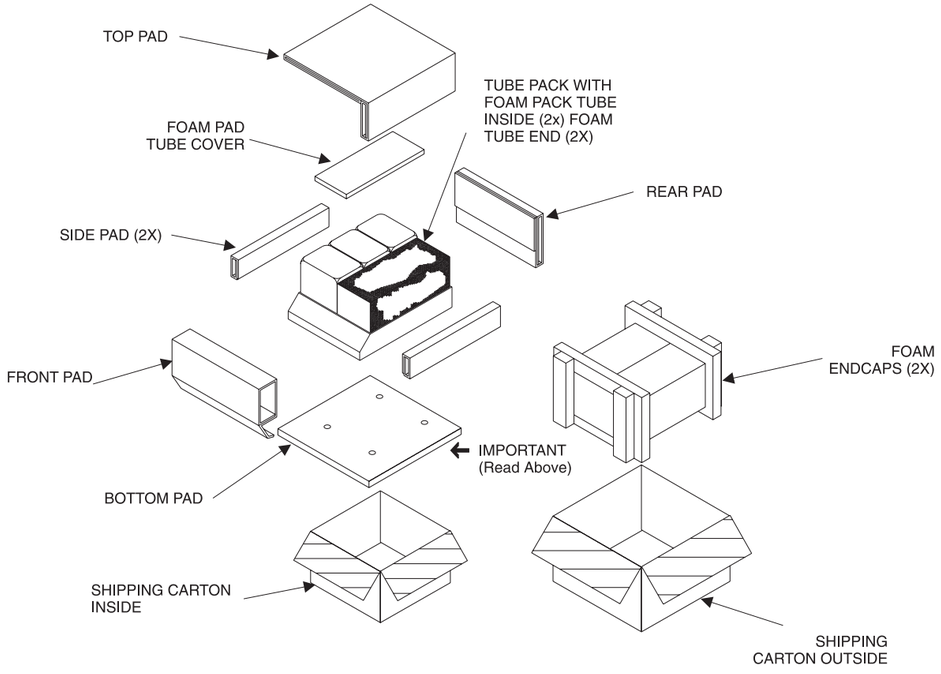
In the event it is necessary to repack the unit for shipment, the unit must be packed exactly as shown below.

IMPORTANT - For ease of shipment, attach the four feet to the bottom of the unit. Failure to due this will result in shipping damage.

If a shipping carton or any of the interior parts is needed, please call or write the Customer Service Department of McIntosh Laboratory. Order parts from the accompanying list by part number.

Use the original shipping carton and interior parts only if they are in good serviceable condition.

Qty.	Part No.	Description
1	033704	Bottom pad
1	033705	Front Pad
1	033706	Rear Pad
1	033707	Top pad
2	033711	Side pad
1	033712	Foam pad (tube cover)
2	033718	Foam endcaps
1	034005	Shipping carton (outside)
1	034006	Shipping carton (inside)
2	034265	Tube pack
2	034266	Tube pack (end)



MC275

STEREO POWER AMPLIFIER

STARTING WITH SERIAL NO. WV1536

SERVICE MANUAL

The continuous improvement of its products is the policy of McIntosh Laboratory Incorporated, who reserve the right to improve design without notice. Because of the constant upgrading of McIntosh products' circuitry and components, the Company cannot insure, and does not warrant, the accuracy of the within schematic material, which is intended for information only.

McINTOSH LABORATORY, INC., 2 CHAMBERS STREET, BINGHAMTON, NEW YORK 13903 Printed in U.S.A. Part Number 041046